

IN THE CLAIMS

Please amend the claims as indicated in the rewritten claims listed below:

Claim Amendments:

1. (Previously Presented) A method for managing applications, making use of at least two physical machines linked by communication means, the method comprising:
 - connecting the at least two physical machines to form a physical machine network, wherein each of the physical machines comprise a physical structure on which is loaded a first software layer adaptable to the corresponding physical machine as well as a second layer forming a virtual layer on which virtual machines will operate, the virtual machine comprising at least one application, each physical machine associated with a plurality of attached parameters;
 - loading a control program to the virtual layer of each physical machine;²⁵
 - establishing a dialogue between the control program and a system management process;
 - defining a service containing a plurality of applications, the service defined by the system management process;
 - communicating between the system management process and each virtual layer in order to determine the status of the virtual machines associated with said virtual layer;
 - assigning a virtual machine to the corresponding virtual layer taking into account one or more characteristics of the application associated with the corresponding virtual layer and one or more of the plurality of attached parameters associated with the physical machines, wherein the virtual machine is independent of the corresponding physical machine the assigning of the virtual machine enabling optimization of resources at the physical machines based on one or more characteristics of the application and the one or more attached parameters of the physical machines.

2. (Previously presented) The method according to claim 1, wherein loading the control program includes determining status of each physical machine on which a virtual layer is placed and communicating the status of each physical machine to the system management process by communication means.

3. (Previously presented) The method according to claim 1, wherein loading the control program further includes determining status of each virtual machine associated with the virtual layer of the corresponding physical machine and communicating the status of each virtual machine to the system management process by communication means.

4. (Previously presented) The method according to claim 1, wherein the system management process further includes:

determining one or more characteristics of the virtual machines and of one or more resources necessary for operating the virtual machines;

performing surveillance of the status of each virtual machine using the control program; associating the status to each virtual machine forming the service; and transmitting the status of each virtual machine associated with the service to an operator.

5. (Previously presented) The method according to claim 4, wherein the system management process further includes,

when the virtual machine is to be relocated from a first physical machine to a second physical machine,

transmitting a stop instruction to the control program available at the first physical machine;

identifying data pertaining to the stopped virtual machine located on the first physical machine;

transferring the identified data to the second physical machine;

assigning the virtual machine to the second physical machine; and

reactivating the virtual machine.

6. (Previously presented) The method according to claim 5, wherein upon successful reactivation of the virtual machine, the system management process further includes,

transmitting an instruction to the control program of the first physical machine to suppress the data pertaining to the virtual machine.

7. (Previously presented) The method according to claim 5, wherein the system management process further includes,

defining one or more operating constraints for the one or more virtual machines associated with a service, wherein the assigning of a virtual machine to a virtual layer of a physical machine and the relocation of said virtual machine to another virtual layer associated with the second physical machine takes into account the one or more operating constraints.

8. (Previously Presented) A method for managing applications, comprising:

establishing a communication link between at least two physical machines to define a physical machine network, the physical machines having a system management process to

manage physical resources available at the corresponding physical machines, each of the physical machine associated with a plurality of attached parameters;

defining a virtual layer for each physical machine, the virtual layer providing an interface to the physical machines to access the physical resources of the physical machines, each virtual layer having a control program to communicate with the system management process;

defining services for specific ones of the virtual layer associated with the physical machine of the physical machine network, the service including at least one application;

defining at least one virtual machine associated to selected physical machines using the virtual layer, the virtual layer associated with the service;

monitoring inventory of the physical machines and the virtual machines, the inventory identifying resources available at the physical machines and resources required at the virtual machines of the physical machine network; and

assigning at least one of the virtual machines to a corresponding physical machine based on resource requirement of the application associated with the service and one or more of the plurality of attached parameters associated with the physical machines, wherein the virtual machine is independent of the corresponding physical machines, the assigning of the virtual machine enabling optimal allocation of inventory at the physical machines based on one or more characteristics of the application and the one or more attached parameters of the physical machines.

9. (Previously presented) The method of claim 8, wherein the system management process further includes,

anticipating resource requirements of the application associated with the service; and

developing resources at the physical machine network to address the resource requirements of the application such that the physical machine network is able to handle the resource requirement load of the service.

10. (Previously presented) The method of claim 8, further includes replacing a physical machine in the physical machine network, the replacement includes,

suspending operation of the virtual machine executing at the virtual layer associated with the physical machine identified for replacement;

identifying data associated with the virtual machine at the physical machine, the data directly associated with the application executing at the virtual machine;

transferring the identified data to a different physical machine;

associating the virtual machine corresponding to the transferred data to the different physical machine; and

activating the virtual machine so as to execute the application at the virtual layer associated with the different physical machine using the data and resources at the different physical machine.

11. (Previously Presented) A method for managing applications, comprising:

defining a physical machine network by communicatively connecting at least two physical machines, the physical machines having a system management process to manage physical resources available at the corresponding physical machines, each of the physical machine associated with a plurality of attached parameters;

providing a virtual layer on each physical machine, the virtual layer including at least an

application that is executed using at least one of a plurality of virtual machines;

associating a control program to the virtual layer on each of the physical machines, the control program managing the operation of the plurality of virtual machines;

coupling the system management process to each virtual layer in the physical machine network, the coupling enabling dialogue between the system management process and the corresponding control program of each virtual layer, wherein the dialogue includes determining status of the physical machines and the plurality of virtual machines within the physical machine network, establishing resource availability at the physical machines and resource requirements of the plurality of virtual machines; and

associating selected ones of the plurality of virtual machines to the virtual layer of particular physical machines within the physical machine network based on the characteristic requirements of the application available at the virtual layer of the particular physical machines and one or more of the plurality of attached parameters associated with the physical machines, wherein each of the plurality of virtual machines is independent of the corresponding physical machines, the assigning of the virtual machine enabling optimization of resources at the physical machines.

12. (Previously presented) The method of claim 11, further includes,

defining a service containing a plurality of applications; and

supervising operation of the service by one of supervising each of the applications or supervising each of the virtual machines that execute each of the applications.

13. (Previously presented) The method of claim 11, further includes relocating a virtual machine from a first physical machine to a second physical machine within the physical machine

network, the relocation includes,

suspending operation of the selected ones of the plurality of virtual machines

associated with the first physical machine;

dissociating the control program at the virtual layer of the first physical machine from the corresponding selected ones of the plurality of virtual machines;

identifying data associated with the application executed on the selected ones of the plurality of virtual machines at the first physical machine;

transferring the data associated with the selected ones of the plurality of the virtual machines from the first physical machine to the second physical machine;

providing a virtual layer at the second physical machine, the virtual layer including an application to be executed by the selected ones of the plurality of the virtual machines;

assigning the selected ones of the plurality of the virtual machines to the virtual layer at the second physical machine, the assigning includes associating a control program to the virtual layer at the second physical machine so as to manage the operation of the selected ones of the plurality of the virtual machines by establishing dialogue between the system management process and the control program; and

activating the selected ones of the plurality of the virtual machines so that the selected ones of the plurality of the virtual machines can execute the application at the virtual layer using the resources and data available at the second physical machine.

14. (Previously Presented) The method according to claim 1, wherein the assigning of the virtual machine to the virtual layer further includes assigning the virtual machine to the virtual

layer associated with a physical machine that is either local or remote.